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Current Support Brief

PHOTOGRAPHY CONFIRMS THE EXISTENCE OF MODERN CONCENTRATING FACILITIES IN THE CHINESE TUNGSTEN INDUSTRY

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Recently scanned photography from flights made over Communist China [redacted] has resulted in the identification of two and possibly three modern tungsten concentrating plants in south-central Kiangsi Province -- the region that supplies more than 50 percent of the country's output of tungsten concentrates (60 percent WO_3). The plants are located in the vicinities of Hsing-kuo (26°22' N - 115°20' E), Ch'ien-nan (24°44' N - 114°24' E), and Ting-nan (24°38' N - 114°50' E), and [redacted] 25X1 indicate their aggregate annual capacity probably comprises a significant part of the modern beneficiating capacity added to the Chinese tungsten industry during the 1950's with extensive Soviet assistance in engineering and equipment. 1/

Combined Sino-Soviet production of tungsten has ranged from 40,000 to 45,000 metric tons of concentrates annually since 1957 (approximately 60 percent of the world's output), with roughly two-thirds coming from Communist China. Consumption criteria indicate that Bloc production for some time has consistently exceeded requirements. Reflecting this continuing excess supply position, tungsten both as concentrate and as ferrotungsten has moved into Western Europe in significant quantities since 1956-57, principally from the USSR and Czechoslovakia. Reportedly, much of the tungsten sold by the USSR and most of that by Czechoslovakia have been of Chinese origin. In addition, smaller quantities of concentrates have moved into Western markets directly from China. Bloc sales have caused world tungsten prices to fall dramatically in recent years, reaching their lowest level since World War II in August 1962, although recovering somewhat in succeeding weeks. 2/ For some Western producers the low world prices are substantially below costs of production, and a number of smaller mines have closed down. The modern concentrating facilities observed in Kiangsi Province suggest that China has the ability to compete on a continuing basis in Western markets.

Before 1953 the Chinese tungsten industry was characterized by a high degree of inefficiency and wastage brought about by a lack of mechanization and modern technology. About 80 percent of the ore was extracted manually from shallow underground mines that frequently were abandoned after the ore in the upper levels was exhausted. The ore was concentrated in local handicraft-type ore-dressing facilities that were capable of producing concentrates containing about 50 percent WO_3 and recovering only a little more than half of the mineral content of the ore. 3/ The concentrates were then transported to a few larger state-run beneficiating plants for upgrading to the commercial standard of 60 to 65 percent WO_3.

During the First Five Year Plan (1953-57), under the guidance and material assistance of the USSR, the Chinese reportedly made considerable progress in modernizing the industry. Press releases indicate that in addition to renovating and expanding many existing ore-dressing facilities, at least 8,000 tons of annual capacity in new large concentrating plants and about 3,000 tons in new small concentrating facilities were put into operation, principally in Kiangsi Province but to a lesser extent also in Kwangtung and Hunan Provinces. 4/ Moreover, modern mining equipment was introduced at all of the large mines, and because many of these mines are located in the mountains, considerable progress was made in building new access roads into the producing areas as well as improving existing ones. Thus, by 1957, the Chinese claimed that approximately 75 percent of all crude ore was being mined mechanically and that 62 percent of the estimated 30,000 tons of concentrates produced in that year came from modern mechanical beneficiating plants where the mineral recovery rate reportedly had been raised to more than 70 percent. 5/ [redacted] 25X

During the 1958-62 period 5,000 additional tons of mechanical ore-dressing capacity was scheduled to be added to the industry. 6/ Communist press announcements indicate that about half of the planned amount had been completed by 1960, but the subsequent deterioration in the domestic economy accompanied by the diversion of investment funds to the agricultural sector probably resulted in little, if any, additional capacity being installed during 1961 and 1962.